

Public Consultation Meeting on Regulatory and Non-Regulatory Fuel Activities for 2005

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Introduction

The Renewable Fuels Association (RFA) is currently conducting a detailed review of the draft staff report entitled “A Summary of the Staff’s Assessment Regarding The Effect of Ethanol in California Gasoline on Emissions”. Since ARB is currently assessing potential changes to the predictive model, as well as considering mitigation strategies for increased permeation emissions, the accuracy and completeness of this report is of great importance to the RFA and its ethanol producer membership.

While we will submit more detailed comments after we have completed a more thorough review of the report, there are some key issues we believe should be brought up now.

New Technology Vehicles

At the time the study was done, the 2001 model year represented newest available technology. Now, however, LEV II and PZEV vehicles are available and these vehicles will have much lower total mass emissions and, as such, any increase would be much smaller on a mass basis. In fact, the CRC has initiated a follow on study to assess these newer vehicles. Moreover, the permeation emissions increase on the 1989 and older model year vehicles in the study (3 vehicles) were much higher than the newer vehicles. Any meaningful fuel assessment must include the results of the new LEV II and PZEV technologies with the permeation emissions increases assigned by model year and weighted by fleet volume, i.e., including up to the 2005 model year..

Auto Alliance Data on Tech 5 Vehicles

Data submitted by the Auto Alliance on Tech 5 vehicles (LEV and ULEV) shows ethanol continues to provide reductions in CO while CARB has assumed no benefit. This same data shows insignificant contributions to NOx from ethanol while CARB has assumed NOx emissions would be the same as Tech 4 vehicles, which showed higher NOx emissions. The CRC work (E-67) that assesses these issues is complete and a report is to be released this month. The new CRC data and the Auto Alliance data needs to be incorporated into all assessments and modeling initiatives.

CO Emission Reactivity

This report assumes a reactivity for CO reactivity of 0.057, i.e., 57 tons of CO is equivalent to one ton of HC. Modeling for CO's effect on ozone by the U.S. EPA determined that a 15 to 1 ratio was appropriate between CO and VOC¹. In other words, reducing 15 tons of CO is equivalent to reducing 1 ton of VOC.

Effect of Preconditioning Cycles

The preconditioning cycle and fuel tank fill levels for tests performed results in overstating the permeation effect on plastic (non-metal) fuel tanks. The fuel systems were preconditioned with the tanks full at 105°F in order to stabilize them. Steady state tests done in the program show much lower permeation when the tanks are only 20% full. Likewise, the 40% fill for the diurnal test also resulted in lower emissions on some rigs. Following is a comparison.

Fill Effect – Steady State Test Results Results Comparing 100% fill to 20% fill

<u>Rig</u>	<u>Vehicle</u>	<u>105°</u>	<u>85°</u>
2	2000 Honda Odyssey	-25%	-32%
4	1997 Chrysler Minivan	-22%	-49%
5	1995 Ford Ranger XL Truck	-9%	0
6	1993 Chevrolet Caprice Classic	-7%	+1%

Fill Level Effect – Diurnal Test Results Results Comparing 40% fill to 20% fill for Preconditioning

<u>Rig</u>	<u>Vehicle</u>	<u>Day 1</u>	<u>Day 2</u>
2	2000 Honda Odyssey	-27%	-26%
4	1997 Chrysler Minivan	-35%	-35%
5	1995 Ford Ranger XL Truck	+8%	+8%
6	1993 Chevrolet Caprice Classic	+10%	+20%

1 EPA (2001) Federal Register (66 FR 37156, 17 July, 2001)

In the real world, vehicles spend a majority of time with less than a full tank, so it is likely that permeation emissions would be less than those found in the CRC study.

Over-Representation of Plastic Fuel Tanks

Vehicles with plastic tanks are over-weighted compared to the in-use fleet. This is very important since plastic tanks provide the greatest surface area through which gasoline components permeate. As an example, Rig #6 (1993 MY) represented all 1992 and 1993 vehicles. Rig #5 (1995 MY) represented 1994 and 1995 model years. Rig #4 (1997 MY) represented 1996 and 1997 model years, and Rig #2 (2000MY) represented one of two rigs for the 1998, 1999, and 2000 model years. Obviously not all vehicles in these nine model years had plastic tanks. In addition, all of the plastic tanks were large tanks ranging in size from 16.5 to 23.0 gallon capacities while the metal tanks ranged from only 13.2 to 17.0 gallon capacities. In effect, the four plastic tanks represented 79.5 gallons capacity of a total of 172.8-gallons capacity total (46%).

As I noted earlier, we will be submitting comprehensive comments once our review of the staff report is completed. However, with regards to the above items, these are clearly important issues that need to be addressed and corrected early in the process.

I appreciate the opportunity to provide input. If I, or the RFA, can be of any assistance in this process, we would be happy to help in any constructive way possible.